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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, DAVID Q	
ART UNIT	PAPER NUMBER
2681	

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/696,491	PARANCHYCH ET AL.	
	Examiner	Art Unit	
	David Q Nguyen	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *1,5,11-12,14,25,27,29,33-36* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-4,6-10,13,15-24,26,28,30-32,37 and 38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 2-4,6-10,13,15-24,26,28,30-32, and 37-38 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2-4,6-7,9,13,15,17-18,30-32, and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeng et al. (US 6,654,613 B1) in view of Nanda et al. (US 6,571,104 B1).

Regarding claim 4, Maeng et al. discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising: detecting an error in control signaling transmitted over a reverse link between the base station and the mobile unit when traffic channels are not being communicated in the reverse link (see col. 4, lines 7 to 65; fig. 3; col. 4, lines 39-42 and col. 3, lines 47-52). Maeng et al does not mention adjusting a power control element based on the detected error, wherein adjusting the power control element comprises adjusting a target ratio of energy per bit to noise spectral density based on the detected error in the control signaling. However, Nanda et al. discloses adjusting a power control element based on the detected error, wherein adjusting the power control element comprises adjusting a

target ratio of energy per bit to noise spectral density based on the detected error in the control signaling (see col. 2, lines 19-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Nanda to Maeng et al in order to improve good signal quality.

Regarding claim 2, the method of Maeng et al. in view of Nanda et al. also discloses wherein detecting the error occurs during a discontinuous transmission mode (see col. 4, lines 7 to 65; fig. 3; col. 4, lines 39-42 of Maeng).

Regarding claim 3, the method of Maeng et al. in view of Nanda et al. also discloses receiving a pilot channel from the mobile unit over the link, the control signaling comprising the pilot channel (see col. 3, line 66 to col. 4, line 3 of Maeng et al); wherein detecting the error in control signaling comprising detecting the error in the pilot channel from the mobile unit (see col. 4, lines 7 to 65; fig. 3; col. 4, lines 39-42 and col. 3, lines 47-52 of Maeng).

Regarding claim 6, the method of Maeng et al. in view of Nanda et al. also discloses wherein detecting the error comprises detecting an error in the control signaling over a given period of time (see col. 7, lines 6-11 of Maeng).

Regarding claims 7 and 8, the method of Maeng et al. in view of Nanda et al. also discloses wherein detecting the error comprises detecting an error in a given number of samples and bits of the control signaling (see col. 4, lines 7 to 65; fig. 3; col. 4, lines 39-42 and col. 3, lines 47-52; (power control bit PCB) of Maeng).

Regarding claim 9, the method of Maeng et al. in view of Nanda et al. also discloses communicating a power control command based on the power control element to affect transmission power of the mobile unit (see col. 4, line 66 to col. 5, line 10 of Maeng).

Regarding claim 13, the method of Maeng et al. in view of Nanda et al. also discloses receiving the control signaling over a link according to a code-division multiple access protocol (see abstract of Maeng et al).

Regarding claim 15, the method of Maeng et al. in view of Nanda et al. also discloses detecting that the mobile unit is in discontinuous transmission mode, wherein detecting the error and adjusting the power control element are performed while the mobile unit is in the discontinuous transmission mode (see col. 4, lines 7 to 65; fig. 3; col. 4, lines 39-42 and col. 3, lines 47-52 of Maeng)

Regarding claims 17 and 18, the method of Maeng et al. in view of Nanda et al. also discloses wherein detecting that the mobile unit is in discontinuous transmission mode comprises detecting a state of a predetermined information field; wherein the information field comprises one or more power control bits of data frame transmitted by the mobile unit (see col. 4, lines 7 to 65; fig. 3; col. 4, lines 39-42 and col. 3, lines 47-52 of Maeng).

Regarding claim 30, Maeng et al disclose an article comprising one or more machine-readable storage media containing instructions for performing tasks in a mobile communications system, the mobile communications system having a mobile unit, a base station, and a link between the mobile unit and base station, the instructions when executed causing a controller to: determine whether the mobile unit is in discontinuous transmission mode (see col. 4, lines 7 to col. 5, lines 10; fig. 3 and fig. 6, as explained in claim 20); detect for one or more errors in control signaling received over the link; and adjust a power control element based on the detected one or more errors in the control signaling if the mobile unit is in the discontinuous transmission mode (see col. 4, lines 7 to col. 5, lines 10; fig. 3 and fig. 6, as explained in claim

20). Maeng et al are silent to disclose adjusting the power control element based on the detected one or more errors in the control signaling if the mobile unit is not in the discontinuous transmission mode and detecting for one or more errors in traffic signaling received over the link;

However, Nanda et al disclose adjusting the power control element based on the detected one or more errors in the control signaling if the mobile unit is not in the discontinuous transmission mode and detecting for one or more errors in traffic signaling received over the link (see col. 1, lines 35 to col. 2, line 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Nanda to Maeng et al in order to improve good signal quality.

Regarding claims 31-32, the article of Maeng et al in view of Nanda et al. also discloses instructions that when executed cause the controller to increase or decrease a target ratio of energy per bit to noise spectral density if an error rate exceeds or does not exceed threshold (see col. 1, line 35 to col. 2, line 63 of Nanda).

Regarding claim 37, the article of Maeng et al in view of Nanda et al. also discloses wherein detecting one or more errors in the control signaling comprises detecting one or more errors in control signaling received over a reverse wireless link from the mobile unit (see col. 4, lines 7 to 65; fig. 3; col. 4, lines 39-42 and col. 3, lines 47-52 of Maeng); wherein adjusting the power control element based on one or more errors in the control signaling of the reverse wireless link if the mobile unit is in discontinuous transmission mode (see col. 4, line 4 to col. 5, line 10; fig. 3 and 6 of Maeng).

Regarding claim 38, the article of Maeng et al in view of Nanda et al. also discloses wherein detecting one or more errors in the control signaling comprises detecting one or more errors in a pilot channel received over a reverse wireless link from the mobile unit (see col. 4, line 4 to col. 5, line 10; fig. 3 and 6 of Maeng); wherein adjusting the power control element comprises adjusting the power control element based on one or more errors in the pilot channel if the mobile unit is in discontinuous transmission mode (see col. 4, line 4 to col. 5, line 10; fig. 3 and 6 of Maeng).

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeng et al. (US 6,654,613 B1) in view of Nanda et al. (US 6,571,104 B1) and further in view of Dohi et al. (US 6,341,224).

Regarding claim 10, the method of Maeng et al. in view of Nanda et al. does not disclose wherein detecting the error comprises detecting a bit error rate in the control signaling of the reverse link. However, Dohi discloses detecting a bit error rate in the control signaling of the reverse link (see col. 6, lines 32-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Dohi to the method in order to adjust power control to improve signal quality of traffic channel.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeng et al. (US 6,654,613 B1) in view of Nanda et al. (US 6,571,104 B1) and further in view of Wang et al. (US 6590874).

Regarding claim 16, the method of Maeng et al. in view of Nanda et al. does not discloses detecting that the mobile unit is in discontinuous transmission mode comprises detecting a power level of a traffic channel transmitted by the mobile unit. However, Wang et al. discloses

detecting that the mobile unit is in discontinuous transmission mode comprises detecting a power level of a traffic channel transmitted by the mobile unit (see abstract and fig. 1B and description). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Wang to the method in order to adjust power control to improve signal quality of traffic channel.

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeng et al. (US 6,654,613 B1) in view of Nanda et al. (US 6,571,104 B1) and further in view of the admitted prior art.

Regarding claim 19, the method of Maeng et al. in view of Nanda also wherein adjusting the power control element is based on the detected error if the mobile unit is detected to be in the discontinuous transmission mode (see explanation above).

They do not mention adjusting the power control element is based on the frame error rate of the traffic channels when the mobile unit is detected to be not in the discontinuous transmission mode.

However, the admitted prior art mentions adjusting the power control element is based on the frame error rate of the traffic channels when the mobile unit is detected to be not in the discontinuous transmission mode (see page 2, lines 10-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the admitted prior art to the method in order to improve good signal quality.

6. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeng et al. (US 6,654,613 B1) in view of Weaver et al. (US 5727033)

Regarding claim 20, Maeng et al disclose a system for use in a mobile communications system comprising a receiver to receive control signaling from a mobile unit (see col. 4, lines 39 to col. 5, line 10 and fig. 3 and fig. 6); a controller to detect whether the mobile unit is in discontinuous transmission mode (see col. 4, lines 39-43 and fig. 3); detect for error in the received control signaling from the mobile unit (see col. 4, lines 39-43 and fig. 3; reverse link) and to adjust a power control condition based on detected error in the received control signaling in response to detecting that the mobile unit is in the discontinuous transmission mode (see col. 4, lines 39 to col. 5, line 10 and fig. 3 and fig. 6). Maeng et al. does not disclose the receiver receive traffic signaling from a mobile unit (see fig. 1 and fig. 2); the controller detects for error in the traffic signaling from the mobile unit and to adjust the power condition based on detected error in the traffic signaling in response to detecting that the mobile unit is not in the discontinuous transmission mode. However, Weaver et al disclose the receiver receive traffic signaling from a mobile unit; and detect for error in the traffic signaling from the mobile unit and to adjust the power condition based on detected error in the traffic signaling in response to detecting that the mobile unit is not in the discontinuous transmission mode (see col. 3, line 20 to col. 4, line 33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Maeng et al in order to improve signal quality of traffic channel.

Regarding claim 21, the system of Maeng in view of Weaver also discloses wherein the control signaling comprises a pilot channels and the controller is adapted to detect an error in the pilot channel and to adjust the power control condition based on the detected error in the pilot channel in response to detecting that the mobile unit is in the discontinuous transmission mode (see col. 3, line 7 to col. 4, line 11 and fig. 3 and 6).

Regarding claim 22, the system of Maeng in view of Weaver also discloses the receiver is adapted to receive code division multiple access control signaling (see abstract of Maeng).

Regarding claim 23, the system of Maeng in view of Weaver also mentions the receiver is adapted to receive IS-2000 control signal (see col. 4, lines25-34)

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeng et al. (US 6,654,613 B1) in view of Weaver et al. (US 5727033) and further in view of the admitted prior art.

Regarding claim 24, the system of Maeng in view of Weaver does not mention wherein the traffic signaling is not transmitted during discontinuous transmission mode. However, the admitted prior art mentions the traffic signaling is not transmitted during discontinuous transmission mode (see page 1, lines 28-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the admitted prior art to the system in order to improve system.

8. Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeng et al. (US 6,654,613 B1) in view of Weaver et al. (US 5727033) and further in view of Nanda et al. (US 6,571,104).

Regarding claim 26, the system of Maeng in view of Weaver does not mention wherein the control and traffic signaling are communicated in a reverse link between the mobile unit and a base station. However, Nanda et al. discloses wherein the control and traffic signaling are communicated in a reverse link between the mobile unit and a base station (see col. 1, lines 35-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Nanda to the system in order to improve system.

Regarding claim 28, the system of Maeng in view of Weaver does not mention the power control condition comprises a target ratio of energy per bit to noise spectral density. However, Nanda et al. also discloses the power control condition comprises a target ratio of energy per bit to noise spectral density (see col. 2, lines 19-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Nanda to the system in order to improve system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Nguyen whose telephone number is 703-605-4254. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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